



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/550,669	04/17/2000	Karen L. Harrison	BLD000007US1	1382

7590 05/27/2004
David W. Lynch
Crawford Maunu PLLC
1270 Northland Maunu PLLC
Mendota Heights, MN 55120

EXAMINER

PHAM, THIERRY L

ART UNIT PAPER NUMBER

2624

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/550,669

Applicant(s)

HARRISON ET AL

Examiner

Thierry L. Pham

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. This action is responsive to the following communication: an Amendment filed on 3/29/04.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 and 16- 20, 31-35, 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Yacoub (U.S. 6552813).

Regarding claim 16, Yacoub discloses a multiplexer (server, Fig. 5) for processing incoming print jobs, comprising:

- (1) a multiplexer interface (virtual printer, Fig. 5, col. 2, lines 8-21) for determining attributes of a print channel (print job/channel preferences include routing a print job to a different printer if the current printer is busy, col. 2, lines 8-21 and col. 4, lines 53-67 and col. 6, lines 45-67) associated with an incoming print job and receiving job description attributes of the incoming print job from the print channel (print job/channel preferences, col. 2, lines 8-21); and
- (2) a multiplexer processor component (server connected via a network, Fig. 5, col. 2, lines 22-30), interfaced with the multiplexer interface, for managing the routing (routing the print job to the best available printer based upon print channel/job attributes, figs. 2-5, col. 2, lines 5-30 and col. 4, lines 53-67 and col. 6, lines 46-67) of the incoming print job based upon the attributes of the print channel and the job description attributes of the incoming print job.

Regarding claims 17-19, Yacoub further discloses the multiplexer of claim 16 wherein the multiplexer processor component determines whether the job description attributes and the print channel attributes dictate an output path, analyzes a state for a dictated output path (determine the output path is busy or free, col. 2, lines 8-21) when the job description attributes and the print channel attributes dictate an output path and routes the incoming print job to the dictated path when the state of the dictated path is free (restart and/or start printing once the output path is free or available, col. 3, lines 6-13).

Regarding claim 20, Yacoub further discloses the multiplexer of claim 17 further comprises a multiplexer output selector (server, Fig. 5) for receiving a user selection input to control spooling of jobs that are not required to be sent to a spooler or a print engine (i.e. sends the documents to server or hard disk drive (HDD) without printing or spooling, which are known in the art), wherein the multiplexer processor component evaluates a setting for a user output selection when the job description attributes and the print channel attributes do not dictate an output path and routes the incoming print job based upon the setting for the user output selection.

Regarding claims 1-5: Claims 1-5 are the method claims corresponding to the apparatus claims 16-20 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 16-20 above.

Regarding claim 31, Yacoub discloses a print system, comprising:

- (1) a print engine (printer, Fig. 5) for receiving a data stream for an incoming print job and generates print media based upon the data stream;
- (2) a spooler (spool via a server, col. 2, lines 23-29) storing incoming print jobs until sent to the print engine; and
- (3) a system controller (network, Fig. 5), coupled to the print engine and the spooler, for controlling the print engine, the spooler and the processing of incoming print jobs, the system controller including a multiplexer for managing the incoming print jobs, the multiplexer further comprising:

Art Unit: 2624

- (4) a multiplexer interface (virtual printer, Fig. 5, col. 2, lines 8-21) for determining attributes of a print channel associated with an incoming print job and receiving job description attributes of the incoming print job from the print channel; and
- (5) a multiplexer processor component (network, Fig. 5, col. 2, lines 22-30), interfaced with the multiplexer interface, for managing the routing of the incoming print job based upon the attributes of the print channel and the job description attributes of the incoming print job

Regarding claims 32-35: claims 32-35 recites the limitations that are included in claims 17-20 (respectively); therefore, claims 32-35 are rejected for the same basis/rationale as described in claims 17-20 above.

Regarding claims 46-49: Claims 46-49 recite limitations correspond to claims 16-20 except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers (i.e. server, Fig. 5) have some type of computer readable memory medium for storing program, hence claims 46-49 would be rejected using the same rationale as in claims 16-20.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-12 and 21-27, 36-42, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacoub as described in claim 16 above, and in view of Nagata (JP 411110163).

Regarding claims 21-22 and 27, Yacoub discloses the multiplexer of claim 20 wherein the multiplexer processor component prints the incoming print job when the incoming print job is not required to be spooled because of the job description attributes or the print channel attributes and the setting of the user output selection is PRINT ALL (all print jobs will be printed with selected printer that meet print jobs preferences, col. 2, lines 8-21 and col. 4, lines 53-67), spools the incoming print job when the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL ALL (all print jobs will spooled by the server and later printed by the selected printer, col. 2, lines 22-29), prints the incoming print job when the printer is available.

However, Yacoub does not explicitly disclose wherein the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when the printer is busy, the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY.

Nagata, in the same field of endeavor for printing, discloses the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when the printer is busy, the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Yacoub as per teachings of Nagata because of a following reason: to use the printers efficiently and to reduce printed output time (Nagata, par. 5 of English translation).

Therefore, it would have been obvious to combine Yacoub with Nagata to obtain the invention as specified in claims 21-22 and 27.

Art Unit: 2624

Regarding claim 23, Yacoub further discloses the multiplexer of claim 22 wherein the print channel attribute is MUST PRINT (prints with selected printer, col. 2, lines 8-21) for print channels that provide bi-directional communication (network interface, Fig. 5) with a host.

Regarding claim 24, Yacoub further discloses the multiplexer of claim 23 wherein the print channel attribute is MUST PRINT for a IPDS port, Coax (network, Fig. 4), Twinax, AppleTalk, Despooler and Internal Print type print control modules.

Regarding claims 25-26, Yacoub further discloses the multiplexer of claim 23 wherein the print channel attribute is MAY SPOOL for Web Pull, Web Push, IPP, FTP, direct print ports (printer connected via network, Fig. 4), LPD, NetBIOS, 3 NetWare, Coas, Twinax and Parallel type print control modules.

Regarding claims 6-12: Claims 6-12 are the method claims corresponding to the apparatus claims 21-27 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 21-27 above.

Regarding claims 36-42: claims 36-42 recites the limitations that are included in claims 21-27 (respectively); therefore, claims 36-42 are rejected for the same basis/rationale as described in claims 21-27 above.

6. Claims 13-15, 28-30, 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacoub and Nagata described in claim 21-22 and 27 above, and in view of Olsen et al (U.S. 2002/0066921).

Regarding claims 28 & 30, the combinations of Yacoub and Nagata as described in claims 21-22 and 27 above, do not explicitly disclose wherein the print job comprising of PDF and IDPS files.

Olsen, in the same field of endeavor for printing, discloses the print job comprising of PDF and IDPS files (p. 7, par. 79).

Art Unit: 2624

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Yacoub and Nagata as per teachings of Olsen because of a following reason: to use the printers efficiently and to reduce printed output time (Nagata, par. 5 of English translation).

Therefore, it would have been obvious to combine Yacoub and Nagata with Nagata to obtain the invention as specified in claims 28 & 30.

Regarding claim 29, Yacoub further discloses the multiplexer of claim 28 wherein the multiplexer processor component spools the PDF file to allow the PDF file to be converted to PostScript before printing (col. 8, lines 18-28).

Regarding claims 13-15: Claims 13-15 are the method claims corresponding to the apparatus claims 28-30 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 28-30 above.

Regarding claims 43-45: claims 43-45 recite the limitations that are included in claims 28-30 (respectively); therefore, claims 43-45 are rejected for the same basis/rationale as described in claims 28-30 above.

Claim 50 corresponds to claim 21 except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers (i.e. servers, fig. 5) have some type of computer readable memory medium for storing computer programs, hence claim 50 would be rejected using the same rationale as in claim 21.

Response to Arguments

7. Applicant's arguments, see page 16, filed 3/29/04, with respect to claims 11, 26, and 41 have been fully considered and are persuasive. The objection of claims 11, 26, and 41 has been withdrawn.

Applicant's arguments filed 3/29/04 have been fully considered but they are not persuasive.

Regarding claim 16, applicants argued the prior art does not teach “a multiplexer interface for determining attributes of a print channel associated with an incoming print job and receiving job description attributes of the incoming job from the print channel”.

In response: Yacoub teaches “a multiplexer interface (virtual printer, Fig. 5, col. 2, lines 8-21) for determining attributes of a print channel (print job/channel preferences include routing a print job to a different printer if the current printer is busy, col. 2, lines 8-21 and col. 4, lines 53-67 and col. 6, lines 45-67) associated with an incoming print job and receiving job description attributes of the incoming job from the print channel”. A specific attribute of print channel was not recite in claim 16. On page 17 of the amendment filed on 3/29/04, applicants stated an example of print channel attribute, “when the print channel is “print all” channel, and an output path is unavailable, the multiplexer interface can stop the flow of the print channel and restart the flow when an output path becomes available, thereby managing the routing of the print job based on the attributes of the print channel”. Yacoub (abstract, col. 2, lines 8-30, col. 3, lines 5-22, col. 4, lines 53-67 to col. 5, lines 1-34 and col. 6, lines 44-67 to col. 7, lines 1-36) teaches a method for selecting an attribute for a print job (i.e. print quality and speed) and sends the print job to the server; the server determines the best available printer via a network that capable of printing a print job with such attributes. If the printer selected is busy, then the server routes the print job to a different available printer that is capable of printing the print job with such attributes; on the other hand, if the users decided to wait, then the server spools the print job data and restarts the flow when an output path (output printers via a network) becomes available.

Regarding claim 16, applicants also argued the prior art does not teach “a multiplexer processor component, interfaced with the multiplexer interface, for managing the routing of the incoming print job based upon the attributes of the print channel and the job description attributes of the incoming print job”.

In response: Yacoub, discloses a multiplexer processor component (server connected via a network, Fig. 5, col. 2, lines 22-30), interfaced with the multiplexer interface, for managing the

Art Unit: 2624

routing (routing the print job to the best available printer based upon print channel/job attributes, figs. 2-5, col. 2, lines 5-30 and col. 4, lines 53-67 and col. 6, lines 46-67) of the incoming print job based upon the attributes of the print channel and the job description attributes of the incoming print job. Please see responsive arguments as described above for more details.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

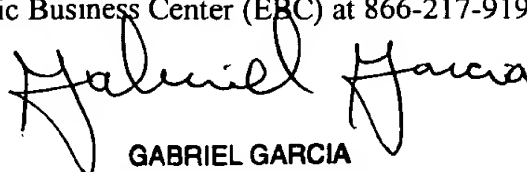
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

TP


GABRIEL GARCIA
PRIMARY EXAMINER